

DIFFUSION BONDING METHOD FOR MICROCHANNEL PLATES

Abstract

A microchannel plate (MCP) (50) and a dielectric insulator (80) are deposited with a thin film (54, 84) using a suitable metal selected for optimum diffusion. The metallized MCP (50) and dielectric insulator (80) are then aligned and placed in a bonding fixture (36) that provides the necessary force applied to the components to initiate a diffusion bond. The bonding fixture (36) is then placed in a vacuum heat chamber to accelerate the diffusion bonding process between the MCP (50) and the dielectric insulator (80).